

REMARKS

Claims 29 to 32 are added, and therefore claims 15 to 32 are currently pending.

Reconsideration of the application is respectfully requested based on the following remarks.

With respect to paragraph 2 of the Office Action, claims 15 to 28 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 6,145,491 to Wilstermann et al. (the "Wilstermann" reference).

As regards the anticipation rejections of the claims, to reject a claim under 35 U.S.C. § 102(b), the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (*See Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). As explained herein, it is respectfully submitted that the Office Action does not meet this standard, for example, as to all of the features of the claims. Still further, not only must each of the claim features be identically described, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed invention, namely the claimed subject matter of the claims, as discussed herein. (*See Akzo, N.V. v. U.S.I.T.C.*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986)).

As further regards the anticipation rejections, to the extent that the Office Action may be relying on the inherency doctrine, it is respectfully submitted that to rely on inherency, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics *necessarily* flows from the teachings of the applied art." (*See* M.P.E.P. § 2112; emphasis in original; and *see Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int'f. 1990)). Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic. Accordingly, it is respectfully submitted that any anticipation rejection premised on the inherency doctrine is not sustainable absent the foregoing conditions.

Independent claim 15, as presented, reads as follows:

15. *A method for detecting knocking, in which a measuring signal of a knock sensor is evaluated during combustion in a cylinder of an internal combustion engine to determine whether or not the combustion is taking place with knocking, the method comprising:*
subdividing the measuring signal into a plurality of time windows within a single combustion cycle;

examining each window to determine whether the combustion occurred with knocking, the examining including separately integrating a signal dependent upon the measuring signal in each of the plurality of time windows to produce a plurality of integrated signals associated with the single combustion cycle; and comparing results of the examining of the plurality of windows to each other for a final assessment of whether the combustion occurred with knocking.

Claim 22, as presented, includes features like those of claim 15, as presented.

The “Wilstermann” reference does not identically disclose (or even suggest) at least the above-identified claim features. Specifically, the “Wilstermann” reference does not disclose (or even suggest) the feature of subdividing the measuring signal into a plurality of time windows within a single combustion cycle, as provided for in the context of the claim. The “Wilstermann” reference also does not identically disclose (or even suggest) the feature of separately integrating a signal dependent upon the measuring signal in each of the plurality of time windows to produce a plurality of integrated signals associated with the single combustion cycle, as provided for in the context of the claim.

Instead, the “Wilstermann” reference only utilizes a single time window within each combustion cycle for detecting knocking, the utilized time window being labeled T_K and occurring between times t_2 and t_3 in FIGS. 1A-3C. Thus, the “Wilstermann” reference does not disclose (or even suggest) a method of detecting knocking involving subdividing the measuring signal into a plurality of time windows within a single combustion cycle, as provided for in the context of the claim. Moreover, the “Wilstermann” reference only produces a single integrated signal corresponding to the time window T_K during each combustion cycle, as evidenced by FIGS. 1C, 2C and 3C. Thus, the “Wilstermann” reference therefore also does not identically disclose (or even suggest) the feature of separately integrating a signal dependent upon the measuring signal in each of the plurality of time windows to produce a plurality of integrated signals associated with the single combustion cycle, as provided for in the context of the claim.

Therefore, the above-discussed features of claims 15 and 22 are not identically disclosed (or even suggested) by the “Wilstermann” reference. Accordingly, claims 15 and 22, and their respective dependent claims, are allowable. It is therefore respectfully requested the anticipation rejections of claims 15 to 28 be withdrawn.

Newly presented claims 29 and 32 do not add any new matter and are supported by the present application.

These claims are allowable at least because they depend upon independent claims 15 and 22, respectively, which are allowable at least for the reasons explained above. Claims 29 and 30 are also allowable for the additional reason that the “Wilstermann” reference does not disclose (or even suggest) a structure-borne sound sensor for producing the measuring signal within the context of the method and device of claims 15 and 22.

More especially, new claims 31 and 32, which respectively depend from claims 15 and 22, specifically provide that the “measuring signal measured by the knock sensor is an acoustical signal”. In this regard, the Wilstermann system uses an ion current signal which is measured by two electrodes that measure the conductivity of the gas in the combustion chamber. The electrodes may be formed by the electrodes of a spark plug in the cylinder (col. 1 line 62 of Wilstermann). In contrast, claims 31 and 32 specifically provide that the knock sensor measures an acoustical signal (as described at lines 3 to 10 of page 3 of the present application), which does not in any way relate to the ion current measurement of the Wilstermann reference. Accordingly, claims 31 and 32 are allowable for these further reasons.

Accordingly, claims 15 to 32 are allowable.

CONCLUSION

Applicants respectfully submit that all pending claims of the present application are allowable. It is therefore respectfully requested that the rejections be withdrawn. Prompt reconsideration and allowance of the present application are therefore respectfully requested.

Respectfully submitted,

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